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AUTHOR Burke, Gerald
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ABSTRACT

This paper discusses the need for increasing the provision of education and training in Australia and the problems in financing it. Section 1 discusses the problems to be addressed: need for more education and training due to technological and global change affecting employment and unemployment, together with the aging of the population. Section 2 briefly reviews the extent to which Australia appears to be addressing the needs. It considers the changes in institutional education and in employer-based training in recent years, looking at issues of participation and intensity, quality, and inequality for younger and older persons. Section 3 considers the restrictions in public expenditure and the various policy changes accompanying it. Section 4 addresses options in ways of providing finance that will encourage the direction of funds for education and training to the areas of most need. These schemes for payment by governments, individuals, and employers are discussed: public funds (entitlements, student assistance--Youth Allowance); payments by individuals (increased fees, increased fees plus access to interest bearing private loans, increased fees plus contingent loans financed by the government as in the Higher Education Contribution Scheme); and increasing employer funding through government-mandated levels of training, social partnerships in training, and

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CEET

Financing vocational training and lifelong learning

Gerald Burke

WORKING PAPER No. 30

MONASH UNIVERSITY – ACER

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September 2000

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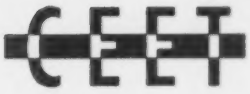
CEET, Faculty of Education, Post Office Box 6,Monash University, Victoria 3800, Australia
Telephone 61 3 9905 9157 Facsimile 61 3 9905 9184 Email ceet@monash.edu.au
http://www.education.monash.edu.au/centres/CEET



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Directors

Gerald Burke (Professorial Fellow, Faculty of Education, Monash University, Executive Director); Phillip McKenzie (Principal Research Fellow, ACER); Leo Maglen (Professor of Vocational Education and Training, University of Melbourne); and Chris Selby Smith (Professor, Department of Management, Monash University).

Research Staff

CEET has six Senior/Research Fellows: Damon Anderson, Fran Ferrier, Sonnie Hopkins, Michael Long, Jeff Malley, and Chandra Shah. Julian Teicher (Executive Director, National Key Centre in Industrial Relations, Monash University) is an Associate of the Centre.

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- analysis of the efficiency and equity in the training market;
- policies to improve the transition of youth from education to work;
- framework for performance measures of school completion and transition to work and study;
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CEET, Faculty of Education, Post Office Box 6,Monash University, Victoria 3800, Australia
Telephone 61 3 9905 9157 Facsimile 61 3 9905 9184 Email ceet@monash.edu.au
http://www.education.monash.edu.au/centres/CEET

Contents

SUMMARY 1

INTRODUCTION 1

DEMOGRAPHIC AND ECONOMIC CHANGE 1

ARE WE MEETING THE NEEDS? 3

Participation and intensity 4
Employer provided training 4

Quality 6

Inequalities 7
Young persons 7
Disadvantage among older persons 8

PUBLIC EXPENDITURE 10

OPTIONS IN FUNDING 11

Public funds 12
Entitlements 13
Student assistance - Youth Allowance 14

Payments by individuals 15

Employer funding 17

CONCLUSION 18

REFERENCES 18

Summary

This paper discusses the need for increasing the provision of education and training and the problems in financing it. Technological and global change are affecting the types and level of employment. The population is ageing. Most of those filling jobs over the next twenty years are already in the labour force and they, as well as the new entrants, will need training. For access to jobs, and for good performance in them, continuing education and training is becoming more important.

The current provision of education and training appears to be falling short of the emerging needs. This is so in both institutional education and in employer-based training. The paper considers issues of participation, intensity, quality and inequality.

Extra resources will be needed but public expenditure is restricted. The paper reviews this and considers ways in which individual and employer funding could be increased.

Introduction

Globalisation, technological and demographic changes have been major factors in highlighting the need for increased education and training throughout life. This includes learning in the formal education system, structured and informal learning on the job and various forms of individual and community learning. Given the likelihood that governments will be unwilling to provide all the additional resources required, there is a need to examine the most efficient and equitable ways of providing education and training and incentives to encourage the financing of education and training by employers and individuals.

The paper has three main sections: section 1 discusses the problems to be addressed: the need for more education and training due to technological and global change affecting employment and unemployment, together with the ageing of the population. Section 2 briefly reviews the extent to which Australia appears to be addressing the needs. It considers the changes in institutional education and in employer based training in recent years. It looks at issues of participation, intensity quality and inequality. Section 3 considers the restrictions in public expenditure and the various policy changes accompanying it. Section 4 addresses options in ways of providing finance that will encourage the direction of funds for education and training to the areas of most need.

Demographic and economic change

The ageing of the workforce draws new attention to the need for increased learning for all. Table 1 shows the age distribution of the Australian population in 1989 and in 1999. There is now very rapid growth in proportion aged 45 and over. The 45 to 64 age group grew by 31 per cent whereas the population aged 15 to 34 grew by only 1 per cent. The changes in age structure are not as advanced in Europe, as births in Australia peaked as late as 1971 and the fertility rate is still well above European rates, though at 1.75 births per woman is well below replacement (McDonald & Kippen 2000). Immigration is high by OECD standards and helps slow the ageing of the population.

Table 1. Population by age, Australia 1989 and 1999, millions

	0-4	5-9	10-14	15-19	20-24	25-34	35-44	45-64	65+	Total
1989	1.244	1.241	1.240	1.413	1.336	2.783	2.510	3.201	1.846	16.814
1999	1.273	1.332	1.317	1.334	1.361	2.892	2.927	4.208	2.322	18.967
% change	2	7	6	-6	2	4	17	31	26	13

Source: Australian Bureau of Statistics (ABS), Catalogue No.3201

Older adults with low levels of education have been particularly affected by economic changes of the last decade. They - particularly males - have suffered a disproportionate decline in jobs in an era of overall high unemployment. Knowledge, and the education and training to acquire it, have become more important yet older less educated adults have not had the opportunities that younger or better educated persons have had to undertake further education and training.

The disadvantage for those with less education in terms of lower earnings is well known. It is compounded by the relation of education with work force participation and employment. The effect is most marked for women where graduates and those who have completed secondary school have much higher rates of employment than those who left school early. The pattern is similar across the OECD.

The expansion of world trade, new technologies and production organised across nations has led to a changing pattern of employment and remuneration. This has been accompanied by a marked decline in public sector employment. There has been a reduction in routine production jobs in manufacturing. The nature of work has changed requiring a changing range of skills even within occupations.

Productivity growth has been high in areas such as communications where production has grown at a remarkable rate but where total employment has not grown much at all. There has been strong growth in employment in areas where it is difficult to measure productivity such as property and business services, associated with the outsourcing of both public sector and private sector work and the growing internationalisation of business. These jobs are often in areas of high skill professional employment. There has also been strong growth in retail trade, restaurants and accommodation which are on average relatively low skill areas.

The changes in industrial structure have tended to reduce employment of both skilled and unskilled men and low skilled women and to expand them in areas in which females had above average employment. The areas of job expansion are not readily accessible to many of the older workers displaced by the decline in employment in manufacturing.

The pursuit of high economic performance has led to the adoption of a range of new work practices. These involve changes in job design, job rotation, greater complexity, higher job skills and working in teams. Measuring the extent of these changes and their effects is a complex task. There does appear to be an increase in the incidence of flexible practices, but there are wide differences across countries that are not easily explained. Workplaces with flexible practices tend to have above average levels of training.

The workforce participation rate of adult males has fallen until recently whereas the participation rate of adult females has tended to rise. There has been a sharp rise in Australia in part-time employment, from 21 per cent of employment in 1990 to 27 per cent in 2000, a much higher rate than the OECD average.

There has been an apparent rise in casual employment, meaning employees not in receipt of holiday and sick leave benefits. Much of this can be attributed to the growth in numbers the self employed who are owners of small incorporated businesses but are treated in the labour force statistics as employees. There has been an increase in the hours of work undertaken by those in full-time employment, with an increase in the proportion of men working very long hours.

There is a perception of an increase in job insecurity though, as in most OECD countries measured job turnover has not increased (OECD 1997, p.143). The perception of increased insecurity may be because with higher unemployment rates the chances or reentry to employment may be lower than in the past. Data on job mobility for Australia suggests that job turnover in the late 1990s is lower than it was in the late 1980s (ABS Catalogue no. 6209.0).

Overall, the changes occurring are tending to increase the earnings of highly skilled people relative to unskilled, and to increase the private benefits of high levels of education and training. It is less clear what the effects are on middle level jobs. There has been a widening in the distribution of earnings in Australia as in many OECD countries.

Employment has not expanded sufficiently to employ all those wanting to work. There still remains unemployment of 6 per cent in August 2000 or about 600,000 persons, despite the very long period of economic growth from the recession of the early 1990s and the increase of 9 per cent in employment in the period 1997 to 2000. Persons unemployed for a year or more make up over a quarter of the unemployed. Underemployment, indicated by persons working part-time but seeking full-time work, is a further problem. In addition there are a large number, about equal to the official number of unemployed, who would like work but are not actively looking for work. Most of these are older adults whose plight has not attracted the same attention as that of unemployed youth[1].

Are we meeting the needs?

The Australian education and training system has been undergoing rapid change from the mid 1980s. It is necessary to review these changes briefly to indicate the main areas of success and areas where reform and additional finance may be needed. The matters considered are the changes in participation in education and training, the changes in intensity, changes in quality and issues of inequality.

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[1] The need to look beyond the measured rate of unemployment is also emphasised by the rising rate of incarceration. This is obvious in the US where the numbers in prisons and jails have trebled in the 1980s and 1990s. The apparently low US unemployment rate of 4.5 per cent can be considered against its high prison population and the workforce engaged in the building and operating of prisons.

Participation and intensity

Table 2 shows recent changes in education participation rates. The participation of those aged 17 to 19 increased from about 62 per cent to 67 per cent and for those aged 20 to 24 from 27 to 33 per cent in the 1990s. Table 2 also indicates that most of the increase occurred by the early 1990s.

Table 2. Education participation rates by age, Australia, 1990, 1992 and 1997, per cent

Age	7-14	15	16	17	18	19	20-24	25-29	30-64
1990	99	100	93	77	60	49	27	15	8
1992	99	99	95	84	66	54	31	16	9
1997	99	98	95	84	65	54	33	17	9

Source: Department of Education Training and Youth Affairs (DETYA) (1999a)

Table 3. shows that the largest increase in participation in the 1990s was in universities, among 20 to 24 year olds. However it also shows the importance of the TAFE system for older persons. About 10 per cent of the population aged 25-29 and 6 per cent of the population aged 30 to 64 were enrolled in TAFE in 1997. The very rapid growth in the population aged 45 and over shown in Table 1 suggests that the role of TAFE may become even more important in the future.

Table 3. Education participation rates by age by sector, Australia, 1990 and 1997 (per cent)

	15-19		20-24		25-29		30-64	
	1990	1997	1990	1997	1990	1997	1990	1997
School	44	50	1	0	0	0	0	0
TAFE	20	18	14	15	9	10	5	6
Higher Education	9	11	11	15	4	5	2	2
Total (includes other)	76	79	27	33	15	17	8	9

Source: DETYA (1999a)

Nearly all school students are full time students, for the whole year. For universities about 60 per cent are full-time. For TAFE and other vocational education only about 15 per cent could be considered full-time. Many TAFE students are taking short courses or even single units which they can commence at varying time in the year. The importance of access to particular short periods of training is a feature that will be considered further below.

Employer provided training

The data in Table 2 and 3 apply only to the formal education system. Surveys undertaken by the Australian Bureau of Statistics (ABS) provide an insight into the extent to which structured training extends beyond the formal education system.

Table 4 shows the percentage of wage and salary earners who either studied or completed training courses in the 12 months prior to the ABS surveys in 1989, 1993

and 1997 respectively. *External training* (training mainly attended by persons *not* working for the same employer and only partly financed by employers) was markedly higher in the 1997 survey. The percentage of wage and salary earners reporting this form of training rose from 12 per cent in 1993 to 20 per cent in 1997. On the other hand the estimated participation in *in-house* training (training mainly attended by persons working for the same employer) fell in the early 1990s and had not recovered its 1989 level by 1996. These changes need careful scrutiny and perhaps reflect a shift towards greater employee responsibility for training. Table 5 provides data from a survey of employers which shows that there was a decline in the proportion of employers providing training in the mid 1990s and in the amount of training provided.

Table 4. Persons aged 15 to 64 with a wage or salary job in last 12 months: Study of training courses in the last 12 months, Australia, 1989, 1993 and 1997 per cent

	Study or Training Courses Undertaken			Total study or training as % of wage and salary earners
	Studied	In-house	External	
1989	17	35	10	48
1993	19	31	12	47
1997	16	33	20	53

Source: ABS Catalogue No.6278.0

Table 4 shows only the incidence of training. It does not show the intensity, that is, the number of hours of training. A full time student in a TAFE of a university can be considered to spend about 1000 hours in class or related activity during the year. The length of a training course in the workplace is usually much shorter. The average length of training courses completed is 26 hours. Persons trained undertake on average about 2 training courses per year and about 55 hours of training in the year.

Other data from the ABS surveys indicate a 30 per cent decline in hours of *in-house* training per employee trained: from 52 hours in the 1989 survey to 38 in 1993 to 36 in 1997 (ABS Catalogue No. 6378.0). One should be careful in interpreting these data as as new methods of delivery may be shortening the time needed for some forms of training[2].

Overall there were nearly 4 million persons undertaking an in-house or an external training course in 1997, much larger than the total numbers in publicly funded VET or higher education. The total of training hours delivered appears to be about two thirds the size of that delivered by public VET providers.

The explanation of the apparent fall in employer expenditure – despite the apparent need for more training could lie in some of the following:

[2] Smith (2000) notes that the picture of the changes in employer training varies across different surveys.

Table 5. Employer Expenditure on Structured Training, Australia July to September, 1990, 1993, 1996

		Employer size			
		1-19 employees	20-99	100 or more	All employers
% of gross wages and salaries	1990	1.4	1.9	3.0	2.6
	1993	1.6	2.7	3.2	2.9
	1996	1.2	1.9	3.2	2.5
Hours of training per employee	1990	4.0	4.1	7.1	5.9
	1993	4.1	5.3	6.2	5.6
	1996	2.4	3.8	6.5	4.9
% employers providing training	1990	19	64	94	24
	1993	18	80	98	25
	1996	13	51	88	18

Source: ABS, Catalogue No.6353.0
Note: Structured training is all training activities which have a predetermined plan and format designed to develop employment-related skills and competencies.

- the growth in part-time and casual work means that an employer (or an individual) has less work or less certainty of employment from which to recoup the investment;
- the continuing relative growth in the private sector which does not provide as much training as the public sector;
- the decline in union membership, since unionised workplaces have been associated with greater levels of training;
- an increase in self employment, associated with low levels of training; and
- a higher aggregate rate of unemployment, reducing the incentive that a tight market gives to retain workers and train them.

Quality

Expansion of enrolments has occurred but at every level of education there is concern about quality. This, as ever, is difficult to assess. In vocational education and training a number of issues figure in heated debate.

The first is the implementation over the last ten years of assessment and training based on industry competency standards, led by the Australian National Training Authority (see ANTA 1998). The most recent innovation is the development of 'training packages' where the main components are the units of competency, the relation of these units of competency to qualifications, and the principles of assessment of competency.

The main objective of the move to competency based training and assessment is to ensure that training meets the needs of industry rather than being determined by the providers of training. Assessment is now to take place much more in the workplace or in simulated workplaces.

The main concerns about this are whether training based around competencies is too narrow, missing the holistic aspects of training and the more generic skills such as ability to work in teams, communication skills and numerical skills.

The development of competency based training has been accompanied by the stress on achievement of competencies by a range of routes, including training based entirely in the workplace without time release for off-the-job training. Some recent reviews have provided examples where there was government financial subsidy for training in the workplace but where little if any training was seen to occur. The need for increased scrutiny of such training has been advised (eg Schofield 1999 and 2000).

Training in TAFE institutions remains the major part of government funded training. The restrictions in public expenditure discussed below have led to reduced time by students in class in some institutions and to the increased use of part-time or sessional staff who are cheaper than full-time staff (Malley et al 2000).

There are strong opinions but to date not much evidence of the effects of such changes. Where new technologies have been used there are some obvious advantages to students in access to materials and in some cases to regular contact with teachers and other students. Such changes may offset the effects of some of the reductions in normal face-to face delivery.

Inequalities

The evidence on equity is mixed. Aggregate measures for target groups tend to show some improvement over time until the early 1990s. The slowing if not cessation in improvement may lie outside the education and training system and in the changing structure of employment, income and families.

Young persons

There is little indication, in aggregate, of disadvantage by gender or of disadvantage for those with a language background other than English. There is strong evidence of continuing disadvantage for the other groups. Indigenous persons appear to be well represented in TAFE, though the types of courses and completion rates indicate disadvantage. They are clearly under-represented in the other sectors of the education and training system in enrolment, attendance and completion.

Persons of low socio-economic background have a lower rate of school completion and of participation in universities. Males from low socioeconomic backgrounds suffered the largest fall in school completion rates which occurred in the years 1993 to 1997. Persons in the lowest quartile by socio-economic status made up 15 per cent of all university students in 1991, but 14.5 per cent in 1997 (DETYA 1999b, p.57). Similar data for changes in vocational education are not available due to changes in the data collection

Census data for 1996 indicate that persons of low socioeconomic status are clustered within particular parts of major cities and country towns. There is indication too that the disparities in economic and social disadvantage in society are widening, so the education system may have greater problems to address than in the past.

Persons from a rural background have a slightly lower rate of completion of schooling but a noticeably lower rate of participation in higher education. On the other hand, participation in vocational education from persons in these groups is somewhat above their share of the population.

Disadvantage among older persons

There is a growing concern for the education and training needs of older persons for economic and equity reasons. Older persons, as discussed, have been severely affected by economic restructuring.

Table 1 showed that the population aged 45 to 64 increased by over 30 per cent in the period 1989 to 1999 compared with an overall growth in population of only 13 per cent.

Australia has a large number of adults with low levels of literacy and skills, many of whom are very disadvantaged in the labour market. Table 6 shows that Australia compares poorly with Sweden, Germany and the Netherlands though better than most of the other countries, in the proportion of the population at the lowest level of assessed literacy, level 1. A higher proportion of older than of younger persons have low levels of literacy: about 10 per cent of 15 to 24 year olds in Australia are at level 1, over 20 per cent of those aged 45-54 and well over 30 per cent those 55 and over. (ABS, Catalogue No. 4228.0).

Table 6. Percentage of the population aged 16 to 65 at IALS document literacy level 1, selected OECD countries, 1994-95

Australia	Canada	Germany	Ireland	Nether-lands	New Zealand	Sweden	Switzerland	United Kingdom	United States
17	18	9	25	10	21	6	17	23	24

Source: OECD (1998, Table A3.1)
Note: IALS is the international adult literacy survey, conducted in 1996. Level 4 is the highest level.

Persons with low levels of literacy are not likely to receive compensating education and training in the workplace. Those with high levels of literacy are much more likely to receive training.

The fact that further education and training is concentrated not on the least but on the best educated is well documented across countries (as shown in Table 7). Here, Australia's performance appears about the average and certainly better than Switzerland and the US.

Table 7. Ratio of participation in career or job related training by workers aged 25 to 54 with a university degree to those who have not finished upper secondary schooling, 1994-95

Australia	Canada	Germany	Nether-lands	New Zealand	Sweden	Switzerland (French)	Switzerland (German)	United Kingdom	United States
2.0	2.3	2.0	1.9	1.8	1.6	4.0	12.3	1.7	4.1

Source: OECD (1999 p.151)

Continuing education and training is similarly linked to higher status and full-time employment. Box 1 summarises the findings which are can be identified in most OECD countries though the relationship varies in strength.

Box 1. Which adults get education and structured training?

- training tends to be provided disproportionately for those with more education
- workers with higher levels of literacy obtain more training
- participation rates rise quite strongly with the level of income, though those on low income who do receive training tend to receive more hours of training
- men and women in employment participate in training at fairly equal rates, though women may receive less employer support and less hours of training over a lifetime
- training participation declines with age
- part-time workers and casual workers participate less than full-time permanent workers
- workers receive more training in countries with higher levels of education, high R& D and high trade in 'high tech' production
- the amount of training is larger the bigger the firm
- training is higher in unionised workplaces
- workers in managerial, administrative, professional or semi-professional jobs have a higher than average intensity of training;
- operators or labourers have low levels of training
- there is a high incidence of training in Finance, insurance and business services; Community, social and personal services; Mining; Utilities (electricity, gas and water); and Public administration
- agriculture and construction have relatively low levels of training
- self employed persons undertake less training than employees
- the unemployed and those not in the labour force receive less education and training than the employed

Public expenditure

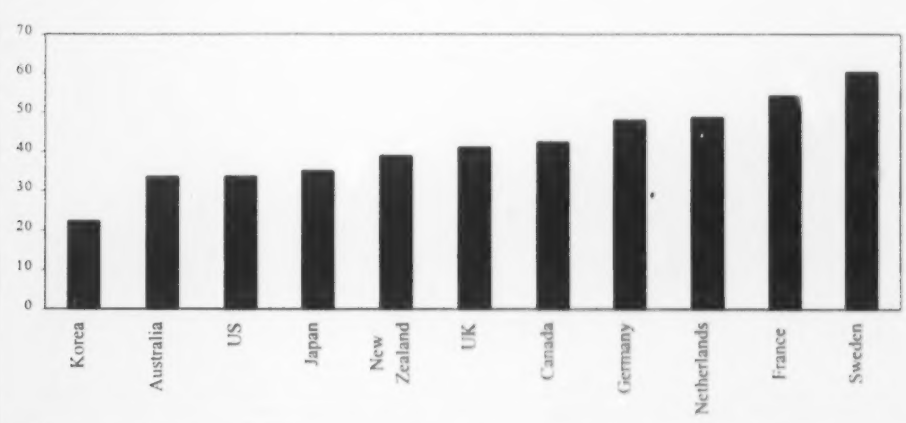
To offset inequalities, to increase participation, the intensity and the quality of training will require extra resources and also more effective use of resources. This section provides an overview of the changes in public funding. The final section discusses some options for public and private funding which may help to stimulate efficiency and to increase private funding.

Despite the fact that more is needed for education and training, governments are reluctant to provide additional funds and Australia is no exception. Figure 1 illustrates the range of general government outlays - on all functions of government - as a percentage of nominal GDP in selected OECD countries. Australia is a very low public spending nation.

The spread in the outlays specifically on education and training are smaller than that in total government outlays. Other activities of government such as social security expenditure vary more than education expenditure. And the countries with lower total government outlays tend to be those with higher private expenditures e.g. Korea, Japan, US and Australia. In some instances the higher levels of private expenditure can simply be attributed to the governments opting out or only partly funding particular sections of education. In other instances governments have, by mandate or incentives, helped to stimulate private expenditures.

It appears that there is no economically determined level of public expenditures that can be tapped for the finance of lifelong learning. It is a matter of the political and economic circumstances and priorities of each country.

Figure 1. General Government Outlays, % of GDP, 1997



The restraint in public expenditure and the expansion of private expenditure on education are indicated in Table 8. A decline in the share of the GDP in the mid 1990s is shown but this was a period of rapid economic growth so a declining percentage of GDP can represent an increase in real resources.

Table 8. Government and Private Expenditures and Outlays on Education, Australia

	Net Private expenditure not financed by government $b	Government outlay $b	Total Outlays as % of GDP
1992-93	3.0	20.9	5.6
1997-98	4.6	25.1	5.2

Source: ABS Catalogue no.5510.0 and unpublished data

There are, though, indicators that suggest a lower rate of resources per student or other unit of delivery of education in both TAFE and universities.

Governments have put part of the delivery of training out to tender from both public and private providers. For the year 2000 about $440 million or over 10 per cent of public vocational funds was to be contestable by public and private providers (ANTA, 1999). This is aimed not only at lowering costs but also at stimulating competition to encourage provision that best meets needs at a low cost.

Public institutions have been encouraged or required to raise additional revenues. In the TAFE system however there have been few changes in regulatory student charges. However significant revenues have been raised from fee for service activity which includes full fee courses, charges to industry for training services and fees charged to overseas students. In 1999 these averaged 9 per cent of revenues across Australia but in Victoria 19 per cent.

In universities the Commonwealth government in 1989 introduced the Higher Education Contributions Scheme (HECS) discussed further below, comprising tuition charges and income contingent loans. There has been a gradual introduction of full fees for most postgraduate courses and international students pay full fees - as they do in VET. A small number of undergraduate places in higher education are now available at full-fee to Australian students.

These changes to financing have been accompanied by an introduction of more devolved forms of management of public education. Institutions are now responsible for the management of most of their funds.

Options in funding

In considering reforms to the methods of financing education and training it is important to assess any proposals against the criteria regarding:

- more education and training;
- efficiency and quality; and
- equity

The main sources of funding for education and training are governments, individuals and employers. Schemes for payment by them are discussed below. Community groups could be considered a further group but are dependent for their funds on the other three.

Public funds

A wide variety of funding methods are used in education. In most countries tuition primary and secondary schooling is available in public schools without tuition fees. Sweden and Finland in 1997 were the only two OECD countries where no fees were charged for tuition at tertiary level (OECD 2000, p.63). Korea, Japan and the United States, small government nations and Greece, are the only OECD countries where the proportion of expenditures that are private are larger than in Australia. In Greece the private expenditures are mainly at sub-tertiary level and in Korea, Japan and the United States at mainly at tertiary level.

In many countries assistance is given to households for senior secondary and tertiary students in the form of grants and (subsidised) loans. Some broad indication of the existence, though not of the importance of various sorts of assistance at tertiary level is given in Table 9.

Table 9. Types of public subsidies available for tertiary education

	Australia	Canada	Czech Republic	Denamrk	Finland	France	Germany	Ireland	Italy	Netherlands	Norway	New Zealand	Poland	Sweden	Switzerland	United Kingdom
Scholarhips and grants																
for tuition fees	✔					✔		✔	✔				✔			✔
for general purposes	✔			✔	✔	✔	✔	✔	✔	✔	✔	✔	✔	✔	✔	✔
Specific subsidies							✔				✔	✔				
Housing					✔		✔		✔		✔	✔				✔
Medical			✔				✔				✔	✔			✔	✔
Transport					✔		✔			✔	✔	✔				✔
Other					✔		✔		✔		✔	✔		✔	✔	
Family or child allowances contingent on student status						✔	✔	✔							✔	✔
Public loans																
Public loans for fees only	✔											✔				
Public loans for general purposes				✔			✔		✔	✔	✔	✔		✔	✔	✔
Government subsidies or guarantees for private loans	✔						✔		✔						✔	
Tax reductions or credits	✔		✔		✔	✔	✔		✔				✔		✔	

Source :OECD (2000 p.72)

It is not a simple matter to draw conclusions from the information in Table 9 as, for example, Sweden does not provide grants of support loans or grants for tuition fees - since it does not charge tuition fees. Australia and New Zealand have introduced fees for university education and do provide loans specifically to cover those fees. Every country listed but the Czech Republic provides some form of grants to tertiary students for general purposes such as living expenses and the Czech republic makes family or child allowances contingent on student status.

Given the diversity of schemes it is possible here to comment only on some examples of entitlements, allowances and loans.

Entitlements

A number of schemes have been proposed for 'entitlements' to permit the less advantaged to have a proportionate or more than average share of government support for education and training. Entitlement proposals differs in detail from the original 'voucher' concept (Friedman 1962, p.93) in guaranteeing for each person an amount of money after compulsory schooling for the purpose of education and training.

Timmermann (1995, p.5) suggests entitlements might be used over a working life for a variety of learning opportunities including university courses, vocational courses, apprenticeships, on-the job training, continuing education programs and vocational and non-vocational adult education. The value of the entitlement might be varied according to the social background of the learners. The entitlements might accumulate interest so that their value would be larger when used later in life. Such a scheme ranks high on equity though there may be a problem of financing high cost courses, assuming that market forces alone will not ensure a correct allocation of training to meet the needs of the workforce.

Levin (1998), who had advocated entitlements in the 1980s, reviewed his proposal in the light of the increasing concern to contain government outlays. As a result he now advocates that an increase in the proportion of government support be based on loans, rather than grants (OECD 1996, 243).

The concept of lifetime entitlements is much discussed but nowhere adopted as a comprehensive scheme. The more limited idea of entitlements to study leave or a voucher for payment for a limited amount of training are more common.

The UK has recently introduced *Individual Learning Accounts*. The government will pay £150 into the account after an adult pays in £25. They will be open to anyone in work but not in full-time education. The funds can be used for any course the adult wants (DFEE 1998a). It is expected that many of the account holders will spend their funds at the newly founded University for Industry (Ufi) which will co-ordinate a network of learning centres in traditional education settings but also in some non-traditional centres like football clubs and churches (DFEE 1998b). These accounts are at an early stage of development but it does appear in mid 2000 that they are unlikely to be a major element in the financing of education and training. One factor is that they are considered too small by the major banks to handle them at a reasonable charge. It is likely instead that more attention will be given to the development in income contingent loans.

Sweden has recently announced a system of Individual Learning Accounts to be used for competence development. These are to be funded by employees and employers contributions, encouraged by a tax entitlement at time of contribution. At time of use the funds are subject to tax, but this is partly offset by a *competence grant premium*. The premium is determined not by the costs of the training or living expenses but by the competence acquired. The scheme is planned to be implemented by 2002 (Commission on Individual Learning Accounts 2000).

An alternative entitlement scheme is the *Franchise Model* advocated by Van Ravens (1998). This involves two elements:

- a lump sum grant by government to finance post secondary school studies but with a rising proportion of self finance with increasing age; and
- an open system of learning where competencies will be accredited whether acquired in the education system, the workplace or the community.

The lump sum grant, which can be used to cover up to 100 per cent of costs for the young, is seen to offset the difficulties of access to finance when they are greatest, which is for young people without income. The 'open system of learning' is seen to promote efficiency in the way people can learn, with a considerable reduction in unit costs. Van Ravens (1998, p.96) argues 'The drop-out phenomenon, considered an irreparable loss in a closed system, is a non-issue here. Everybody drops out all the time and everybody drops back in. The time it takes to graduate does not need to be reduced and becomes irrelevant'.

There are some similarities, in effect, to the franchise model in the current operations of the Australian vocational education and training system. Over the last decade there has been a promotion of competency based assessment and the recognition of prior learning including learning in the workplace. The provision of training largely or entirely in the workplace has been promoted.

There is no lump sum of finance available but the level of fees is low (and at least partly waived for low income students) in the very large public vocational education and training system. Courses are available on a part-time and evening basis, sometimes at the weekend or with flexible delivery. The programs range from remedial and educational preparation for those who did not complete secondary school, entry level vocational training and advanced vocational training.

There are two very positive aspects of the Australian system which may in part be attributed to the aspects just described. First, Australia has the highest level of enrolment by persons aged 30-39 and second highest for persons 40 and over. Second, there is a very high proportion of students who take units of competency (modules or subjects) successfully but do not bother to complete the whole course. This has been estimated at 50 per cent of all commencers of courses (Foyster, Hon and Shah, 2000). There is movement in and out of the system, as the need arises, that Van Ravens advocates.

The Australian system does not have the incentive to efficiency, as in the franchise model. This is the incentive that might come from the funds being allocated entirely at the discretion of the student across all forms of potential learning. However, there are aspects of this in User Choice. User choice can lead to the public funds flowing to private recognised training organisations which include private colleges but also the training arm of many major corporations (e.g. hotels chains). The early experienceof User Choice has been given some endorsement but there are concerns about quality assurance and the need for better monitoring of the system especially for training which has no off-the job component (Schofield 1999, 2000).

Student assistance - Youth Allowance

If students are to participate in full-time education and training they may need some assistance with living costs. Many students, including the majority in VET are not full-time and may not entitled to the Youth Allowance provided by the

Commonwealth which is subject to various income and wealth tests. Many students, both full and part-time have part-time employment both in term time and in vacation. It is not easy to generalise about the extent to which they need financial assistance.

Australia has a tradition of considering support for student living expenses separately from support for tuition costs. It is not clear that they should be considered separately. The arguments for entitlements, just considered, or for fees and loans discussed below, could be extended to apply to student living expenses. The point can be emphasized by noting that Sweden uses its loan schemes for student living expenses. Australia relies mainly on grants for living expenses for full-time school, VET and higher education students. It uses loans for tuition costs in higher education but not for the other sectors.

Payments by individuals

Given the limits to public funds there may be a case for introduction of additional fees in education and training. At the moment the fees charged in publicly provided VET are low, usually not exceeding $500 for a full-year enrolment with exemptions for low income disadvantaged students.

Several options can be considered:

1. Increased fees
2. Increased fees plus access to interest bearing private loans
3. Increased fees plus income contingent loans financed by government as in the Higher Education Contribution Scheme.

The first option could be a simple increase in fees with exemptions provided to low income groups. However this seems likely to deter many people who do not qualify for exemptions but who do not have ready access to funds to pay fees. The option also seems likely to decrease the quantity of training undertaken, when the objective is to increase it

The second option does not have the same drawbacks as the first. Students will be able to pay fees if they can get loans. But they may be unwilling to incur a growing debt when the extra earnings resulting from their training are uncertain and not likely to be as high as for university graduates (Long et al 1999). Other disadvantages are the consequences of default for the future creditworthiness of the person concerned.

The third option is to extend the Higher Education Contribution Scheme (HECS) to VET students. HECS is the system of tuition charges and income contingent loans that was introduced into higher education in Australia in 1989. By 1998 receipts from the scheme offset more than 15 per cent of government grants for higher education.

Under the HECS scheme:

- students were initially required to pay about 20 per cent of the operating costs;
- a discount was made to the charge if students paid the fee up-front;
- repayment (through the income tax system) could be deferred until the student's income reached the level of average earnings in the community;
- no payment was required if income did not reach this level; and

- no interest was charged but repayments were adjusted by the consumer price index..

The early evaluations did not detect any notable deterrence to enrolment. But there were major changes to the scheme in 1996. Since then

- repayment must be made when income reaches about two thirds of average earnings; and
- the level of the charge has been raised and now varies by course, higher for courses that cost more to provide and for those, such as law, that lead to higher incomes.

While it still appears that the HECS scheme is not a notable deterrent to enrolment (Andrews, 1999) a recent government study suggested that participation in higher education by people from socio-economically disadvantaged backgrounds remains low and is becoming gradually lower (DETYA, 1999b, p.58).

Extending such a scheme to VET would be complicated and its effects less clear. TAFE clearly caters for less advantaged persons than does the higher education sector. The case for the introduction of HECS to universities made by the Wran committee (1988) was based largely on the higher incomes later received by university graduates. As mentioned, the studies of the income of TAFE graduates suggest on average only a modest addition to earnings as a result of their courses. On ground of fairness and also concern about deterrence from study this must be given close attention in any consideration of higher fees in VET.

The case for investigating the application of HECS to the VET and for making more similar the methods of organising and funding the separate sectors, has been made by Chapman et al (2000). They draw attention to:

- the increasing numbers of students moving across education sectors;
- the limited credit given to those who have studied in TAFE when they move to higher education;
- the administrative complexities for students studying in both systems;
- the complexities in managing the finances in joint TAFE and university institutions;
- the complexities caused by different pay and working conditions for staff in TAFE and universities;
- the complexities of the Commonwealth having the funding responsibility for universities and States having the main responsibility for VET;
- the relatively low level of fees in TAFE compared with those in university;
- the exemptions from some or all fees in TAFE (but not in universities) e.g. for those who are on Youth Allowance or have a jobseekers card;
- the deterrent effect of even relatively low upfront fees if loans are not readily available; and
- the possibility of HECS type arrangement where significant fees are charged in VET.

The need for further research to find methods that improve the ease of training across the systems and increase the fairness in the distribution of resources is endorsed.

Employer funding

Contracts of training, as for apprenticeships, are a means of encouraging employers to finance general training on the understanding that they can pay a less than market wage (Dougherty 1997). The justification for this is the many studies that show that much of the rewards for training are captured by employees either with the firm that provided the training or on leaving that firm (Long et al 2000). In either case the employer providing the training does not take receive the total benefits of the training. In these circumstances there is likely to be an underinvestment in training unless some of the costs are shifted to employees or government.

Policies for increasing the financial investment of firms include attempts to exhort firms to provide more training. Australia does not have the concept of the social partnership and the social obligations of employers to anything like the extent of Germany.

Australia had a Training Guarantee scheme in the early 1990s requiring minimum levels of employer training expenditure or contributions for collectively funded training as a percentage of wages. The Australian scheme appeared to increase the level of expenditure of medium sized employers but not larger ones whose expenditure usually exceeded the required level prior to the introduction of the scheme. Very small employers were exempt. Arguments against the scheme were its unpopularity with employers and also that it took no account of the way in which the amount of training required could vary with the type of employment.

France has a system that requires employers to undertake particular minimum levels of training. Greenhalgh (1999, p.109-11) finds that in France the training is markedly longer in duration than in Britain where there is no compulsory requirement. There is merit, she therefore finds, in a levy system as a means of offsetting the identified underinvestment in employer provided training.

Social partnerships in training are used in some countries. A good example, from outside the OECD, is the skill development centres in Malaysia. These are non-profit private corporations established with funds from State government foundations and contributions from employers. They are governed by boards with a heavy representation of employers. They are usually sited close to industrial parks and support in-plant training in the first instance and also training both on and off the job for qualifications. The most successful of these, in Penang, is regarded as a model for the efficient and responsive provision of training. They stand in contrast to the expensive and traditional, if good quality, training provided in government owned and operated technical institutions in Malaysia.

Employer reporting of intellectual capital has been promoted in the OECD and is being studied in Australia (Ferrier & McKenzie, 1999). Such reporting may have an impact on information about the benefits of training, the greater planning of training and better use of personnel. One means of promoting this reporting is a requirement on firms for greater disclosure of their intellectual capital. However it seems unlikely that this will occur until schemes seen as useful and usable have been developed and more widely trailed as in Finland and Denmark (Wesphalen 1999, p.27).

Conclusion

This paper discusses the factors giving rise to a need for increasing the provision of education and training and the problems in financing it. Technological and global change are affecting both employment and unemployment. A related factor is the ageing of the population and the labour force.

The current provision of education and training appears to be falling short of the current and the emerging needs. This is so in both institutional education and in employer-based training. There are concerns about the levels of participation, the amount of education and training, its quality and the continuing levels of inequality in provision.

Extra resources will be needed but public expenditure is limited by political if not economic factors. The paper reviews several forms of finance focussing on how they affect the quantity of education and training, the efficiency in its provision and the effect on inequality. It considers public assistance to students including some new proposals for entitlements. It outlines the major issues in schemes involving increased student payment of fees including systems of 'entitlements'. It discusses ways of increasing employer expenditures.

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